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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,171	01/16/2001	Lothar Zimmermann	P20465	9812
7055	7590	02/11/2004		
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			EXAMINER JIMENEZ, MARC QUEMUEL	
			ART UNIT 3726	PAPER NUMBER
			DATE MAILED: 02/11/2004	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/759,171

Applicant(s)

ZIMMERMANN, LOTHAR

Examiner

Marc Jimenez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
4a) Of the above claim(s) 24-46 and 48-51 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-22, 47 and 52-54 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 16 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-8, 12, 13, 16-18, 20, 21, and 47** are rejected under 35 U.S.C. 102(b) as being anticipated by Holroyd et al. (2,534,818).

Holroyd et al. teach a roll for smoothing a web comprising: a roll core **10** having an outer surface, a covering layer **12** disposed on the outer surface of the roll core **10**, the covering layer **12** having an inner surface and an outer surface, the covering layer **12** comprising at least one thermosetting plastic (col. 2, line 17 and col. 4, lines 64-68) and at least one thermoplastic (col. 2, line 20 and col. 4, lines 68-70), wherein the at least one thermoplastic has a melting temperature which is below a glass transition temperature of the at least one thermosetting plastic (col. 4, lines 64-71), wherein the covering layer **12** has a smooth outer surface (col. 1, lines 21-22 “smoothness of the outer surface of the ironer roll” and col. 2, lines 15-18, “...cover for ironer rolls which is impregnated with a substantial amount of thermosetting resin to impart to the fabric the desired smoothness of surface,...”). Regarding the limitations “wherein the roll is a smoothing paper web roll” in claim 1 and “wherein the web is a paper web” in claim 2, a recitation of the intended use of the claimed invention must result in a structural difference

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between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Regarding claim 3, the roll core **10** comprises a hard metal roll core (col. 3, lines 37-38).

Regarding claims 4 and 16-18, the covering layer **12** comprises a matrix material and wherein one of fillers and fibers (col. 3 lines 67-75 to col. 4, lines 1-5) are embedded in the matrix material.

Regarding claim 5, the amount of thermosetting plastic is greater than the amount of thermoplastic (col. 3, lines 14-18).

Regarding claims 6-8, the claimed proportions of thermosetting plastic to thermoplastic is shown at col. 3, lines 14-18.

Regarding claims 12 and 13, the covering layer **12** comprises a mixture of the at least one thermosetting plastic (col. 2, line 17 and col. 4, lines 64-68) and the at least one thermoplastic (col. 2, line 20 and col. 4, lines 68-70) and wherein an amount of the thermosetting plastic relative to the amount of thermoplastic in the covering layer comprises a mixture ratio which is essentially constant over an axial length and radial thickness of the covering layer **12**.

Regarding claims 20 and 21, the covering layer includes fibers and fillers (col. 3 lines 67-75 to col. 4, lines 1-5).

In col. 4, lines 64-71, Holroyd et al. gives examples of thermoplastics that could be used, namely: acrylic resin such as polymethyl methacrylate, or Kandar, polystyrene or polyvinyl

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butyral. Holyroyd et al. also give examples of thermosetting resins that could be used, namely: melamine-formaldehyde, urea-formaldehyde, a polyester resin, an alkyd resin, or styrene-maleic anhydride copolymer resin. It is noted that if the thermoplastic that was used was “acrylic resin” (which has a melting temperature of 130degrees C, see physical properties of acrylic resin attached to the previous office action) and the thermosetting resin that was used was “styrene-maleic anhydride copolymer resin” (which has a glass transition temperature of 155 degrees C, see physical properties of styrene-maleic anhydride copolymer resin attached to this office action), the thermoplastic has a melting temperature (130degrees C) which is below a glass transition temperature of the thermosetting plastic (155 degrees C). Furthermore, applicant has submitted a “Plastics Chooser Chart” to show that one of ordinary skill in the art is well aware of both thermoplastics and thermosetting plastics and such a skilled person also knows the particular properties of such plastic types, wherein polyester resin, a thermosetting, is listed along with acrylic, which is a thermoplastic. Applicant also states that each of the commonly known materials would suffice to practice the instant invention (see page 10 of applicant’s response filed 8/30/02, paper #9). Therefore, since Holyroyd et al. teach using a polyester resin (col. 4, line 66) and an acrylic (col. 4, line 69), Holyroyd et al. inherently teaches that the thermoplastic has a melting temperature which is below a glass transition temperature of the thermosetting plastic.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 9-11, 14, 15, 19, and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Holroyd et al.

With respect to Claims 9-11, Holroyd et al. teach the invention cited above with the exception of using at least two different thermoplastics and at least two different thermosetting plastics.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to use at least two different thermoplastics and at least two different thermosetting plastics because applicant has not disclosed that using at least two different thermoplastics and at least two different thermosetting plastics provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with either one thermoplastic and one thermosetting plastic as taught by Holroyd et al. or the claimed at least two different thermoplastics and at least two different thermosetting plastics because both combinations perform the same function of providing a layer that work equally as well considering the desired heat resistance on the surface of the roll.

With respect to Claims 14 and 15, Holroyd et al. teach the invention cited above with the exception of the mixture ratio varying over a radial thickness of the covering layer.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have provided a mixture ratio that varies over a radial thickness of the covering layer because applicant has not disclosed that a mixture ratio that

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varies over a radial thickness of the covering layer provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with either mixture ratio as taught by Holroyd et al. or the claimed mixture ratio that varies over a radial thickness of the covering layer because both mixture ratios perform the same function of providing a layer that work equally as well considering the desired heat resistance on the surface of the roll.

With respect to Claims 19 official notice is taken that it is well known in the art to use the claimed reinforcing fibers.

With respect to Claim 22, Holroyd et al. teach the invention cited above with the exception of using powdered fillers.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have used powdered fillers because applicant has not disclosed powdered fillers provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with either the fibers taught by Holroyd et al. or the claimed powdered fillers because both fillers perform the same function of providing a reinforcement equally as well considering the desired reinforcement of the surface layer.

5. **Claims 52-54** are rejected under 35 U.S.C. 103(a) as being unpatentable over Paasonen et al. (6,409,645) in view of Holroyd et al.

Paasonen et al. teach a roll for smoothing a web comprising: a roll core **20** having an

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outer surface **20**, a covering layer **50** disposed on the outer surface of the roll core **20**, the covering layer **50** having an inner surface and an outer surface, the covering layer **50** comprising at least one thermosetting plastic and at least one thermoplastic (col. 4, lines 58-62, Paasonen et al. specifically teach that mixtures and blends of thermoplastic and thermosetting polymers can be used), wherein the covering layer **50** contains no through-apertures and has a smooth outer surface.

However, Paasonen et al. do not specifically teach the particulars of the thermoplastic and thermosetting plastic wherein the at least one thermoplastic has a melting temperature which is below a glass transition temperature of the at least one thermosetting plastic.

Holroyd et al. teach using at least one thermoplastic having a melting temperature which is below a glass transition temperature of at least one thermosetting plastic (col. 2, lines 17 and 20 and col. 4, lines 64-70).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Paasonen et al. with at least one thermoplastic having a melting temperature which is below a glass transition temperature of the at least one thermosetting plastic, in light of the teachings of Holroyd et al., in order to provide improved tear resistance and wear resistance at elevated temperatures. Furthermore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have selected the claimed material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. See also *Ballas Liquidating Co. v Allied industries of Kansas, Inc.* (DC Kans) 205 USPQ 331.

Regarding claim 53, the roll is a smoothing paper web roll (col. 1, lines 20-21).

Regarding claim 54, the covering layer **50** is a solid cylindrical mass.

Response to Arguments

6. Applicant's arguments filed 11/14/03 have been fully considered but they are not persuasive.

7. Holroyd et al. clearly teach "a solid cylindrical mass" as previously addressed (see for example page 17, lines 1-4 of the response filed 11/14/03). It is noted that "a solid cylindrical mass" was deleted from claims 1 and 47, but added to new claim 54.

8. After further consideration, it has been determined that the limitation "wherein the roll is a smoothing paper web roll" does not add any additional structure to the roll. This limitation just names the roll a certain type of roll. For example, a Frisbee could be called a plate in a similar naming fashion. Furthermore, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Holroyd et al. meet each of the claimed structural features of the roll.

9. It is noted that the covering layer **50** of Paasonen et al. has no through apertures.

Contact Information

10. Telephone inquiries regarding the status of applications or other general questions, by persons entitled to the information, should be directed to the group clerical personnel. In as much as the official records and applications are located in the clerical section of the examining groups, the clerical personnel can readily provide status information. M.P.E.P. 203.08. The Group clerical receptionist number is (703) 308-1148.

If in receiving this Office Action it is apparent to applicant that certain documents are missing, e.g., copies of references cited, form PTO-1449, form PTO-892, etc., requests for copies of such papers or other general questions should be directed to Tech Center 3700 Customer Service at (703) 306-5648, or fax (703) 872-9301 or by email to CustomerService3700@uspto.gov.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is **703-306-5965**. The examiner can normally be reached on **Monday-Friday, between 5:30 am- 2:00 pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

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MJ

February 5, 2004